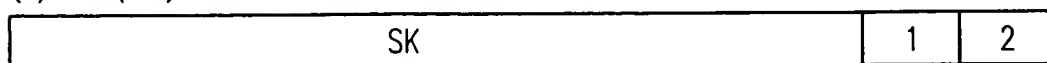
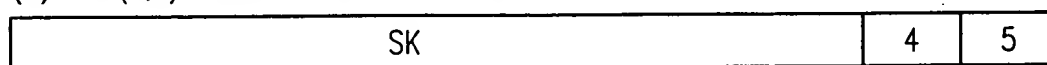


NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

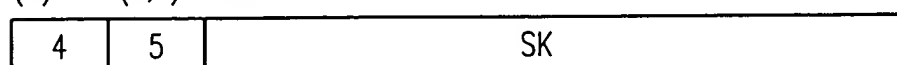
(A) FBD(1,2) fused at the C-terminal of SK



(B) FBD(4,5) fused at the C-terminal of SK



(C) FBD(4,5) fused at the N-terminal of SK



(D) FBD(4,5) fused at both the C as well as N-terminals of SK

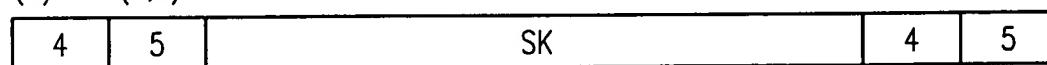


FIG. 1

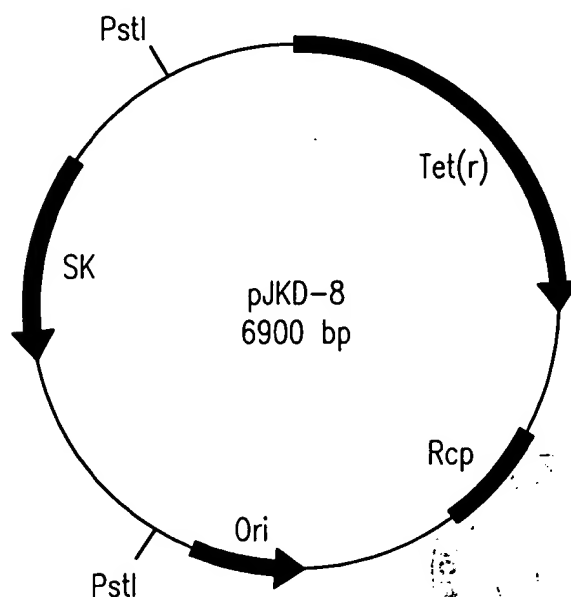


FIG. 2

FIG. 3-1

| | |
|---|---|
| 1/1 | 31/11 |
| ATT GCT GGA CCT GAG TGG CTG CTA GAC CGT | CCA TCT GTC AAC AAC AGC CAA TTA GTT GTT |
| ile ala gly pro glu trp leu leu asp arg | pro ser val asn asn ser gln leu val val |
| 61/21 | 91/31 |
| AGC GTT GCT GGT ACT GTT GAG GGG ACG AAT | CAA GAC ATT AGT CTT AAA TTT TTT GAA ATC |
| ser val ala gly thr val glu gly thr asn | gln asp ile ser leu lys phe phe glu ile |
| 121/41 | 151/51 |
| GAT CTA ACA TCA CGA CCT GCT CAT GGA GGA | AAG ACA GAG CAA GGC TTA AGT CCA AAA TCA |
| asp leu thr ser arg pro ala his gly gly | lys thr glu gln gly leu ser pro lys ser |
| 181/61 | 211/71 |
| AAA CCA TTT GCT ACT GAT AGT GGC GCG ATG | TCA CAT AAA CTT GAG AAA GCT GAC TTA CTA |
| lys pro phe ala thr asp ser gly ala met | ser his lys leu glu lys ala asp leu leu |
| 241/81 | 271/91 |
| AAG GCT ATT CAA GAA CAA TTG ATC GCT AAC | GTC CAC AGT AAC GAC GAC TAC TTT GAG GTC |
| lys ala ile gln glu gln leu ile ala asn | val his ser asn asp asp tyr phe glu val |
| 301/101 | 331/111 |
| ATT GAT TTT GCA AGC GAT GCA ACC ATT ACT | GAT CGA AAC GGC AAG GTC TAC TTT GCT GAC |
| ile asp phe ala ser asp ala thr ile thr | asp arg asn gly lys val tyr phe ala asp |
| 361/121 | 391/131 |
| AAA GAT GGT TCG GTA ACC TTG CCG ACC CAA | CCT GTC CAA GAA TTT TTG CTA AGC GGA CAT |
| lys asp gly ser val thr leu pro thr gln | pro val gln glu phe leu leu ser gly his |
| 421/141 | 451/151 |
| GTG CGC GTT AGA CCA TAT AAA GAA AAA CCA | ATA CAA AAC CAA GCG AAA TCT GTT GAT GTG |
| val arg val arg pro tyr lys glu lys pro | ile gln asn gln ala lys ser val asp val |
| 481/161 | 511/171 |
| GAA TAT ACT GTA CAG TTT ACT CCC TTA AAC | CCT GAT GAC GAT TTC AGA CCA GGT CTC AAA |
| glu tyr thr val gln phe thr pro leu asn | pro asp asp asp phe arg pro gly leu lys |
| 541/181 | 571/191 |
| GAT ACT AAG CTA TTG AAA ACA CTA GCT ATC | GGT GAC ACC ATC ACA TCT CAA GAA TTA CTA |
| asp thr lys leu leu lys thr leu ala ile | gly asp thr ile thr ser gln glu leu leu |
| 601/201 | 631/211 |
| GCT CAA GCA CAA AGC ATT TTA AAC AAA AAC | CAC CCA GGC TAT ACG ATT TAT GAA CGT GAC |
| ala gln ala gln ser ile leu asn lys asn | his pro gly tyr thr ile tyr glu arg asp |
| 661/221 | 691/231 |
| TCC TCA ATC GTC ACT CAT GAC AAT GAC ATT | TTC CGT ACG ATT TTA CCA ATG GAT CAA GAG |
| ser ser ile val thr his asp asn asp ile | phe arg thr ile leu pro met asp gln glu |
| 721/241 | 751/251 |
| TTT ACT TAC CGT GTT AAA AAT CGG GAA CAA | GCT TAT AGG ATC AAT AAA AAA TCT GGT CTG |
| phe thr tyr arg val lys asn arg glu gln | ala tyr arg ile asn lys lys ser gly leu |
| 781/261 | 811/271 |
| AAT CAA GAA ATA AAC AAC ACT GAC CTG ATC | TCT GAG AAA TAT TAC GTC CTT AAA AAA GGG |
| asn glu glu ile asn asn thr asp leu ile | ser glu lys tyr tyr val leu lys lys gly |
| 841/281 | 871/291 |
| GAA AAG CCG TAT GAT CCC TTT GAT CGC AGT | CAC TTG AAA CTG TTC ACC ATC AAA TAC GTT |
| glu lys pro tyr asp pro phe asp arg ser | his leu lys leu phe thr ile lys tyr val |
| 901/301 | 931/311 |
| GAT GTC GAT ACC AAC GAA TTG CTA AAA AGT | GAG CAG CTC TTA ACA GCT AGC GAA CGT AAC |
| asp val asp thr asn glu leu leu lys ser | glu gln leu leu thr ala ser glu arg asn |

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

FIG. 3-2

961/321

TTA GAC TTC AGA GAT TTA TAC GAT CCT CGT
leu asp phe arg asp leu tyr asp pro arg
1021/341GAT GCT TTT GGT ATT ATG GAC TAT ACC TTA ACT GGA AAA GTA GAG GAT AAT CAC GAT GAC
asp ala phe gly ile met asp tyr thr leu thr gly lys val glu asp asn his asp asp
1081/361ACC AAC CGT ATC ATA ACC GTT TAT ATG GGC AAG CGA CCC GAA GGA GAG AAT GCT AGC TAT
thr asn arg ile ile thr val tyr met gly lys arg pro glu gly glu asn ala ser tyr
1141/381CAT TTA GCC TAT GAT AAA GAT CGT TAT ACC GAA GAA GAA CGA GAA GTT TAC AGC TAC CTG
his leu ala tyr asp lys asp arg tyr thr glu glu glu arg glu val tyr ser tyr leu
1201/401CGT TAT ACA GGG ACA CCT ATA CCT GAT AAC CCT AAC GAC AAA TAA
arg tyr thr gly thr pro ile pro asp asn pro asn asp lys OCH

991/331

GAT AAG GCT AAA CTA CTC TAC AAC AAT CTC
asp lys ala lys leu leu tyr asn asn leu
1051/351ACT GGA AAA GTA GAG GAT AAT CAC GAT GAC
thr gly lys val glu asp asn his asp asp
1111/371AAG CGA CCC GAA GGA GAG AAT GCT AGC TAT
lys arg pro glu gly glu asn ala ser tyr
1171/391GAA GAA GAA CGA GAA GTT TAC AGC TAC CTG
glu glu glu arg glu val tyr ser tyr leu
1231/411

Applicant(s): Rajesh Kumar, et al.

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

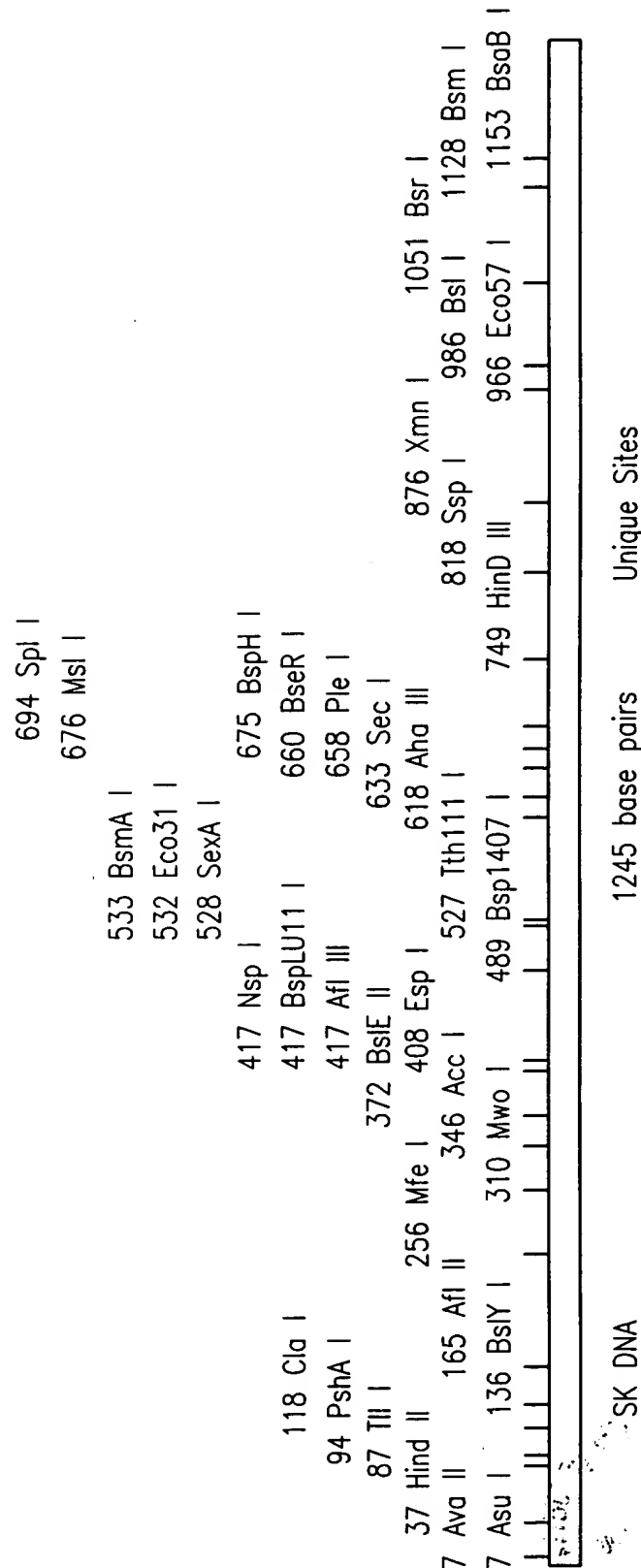


FIG. 4

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

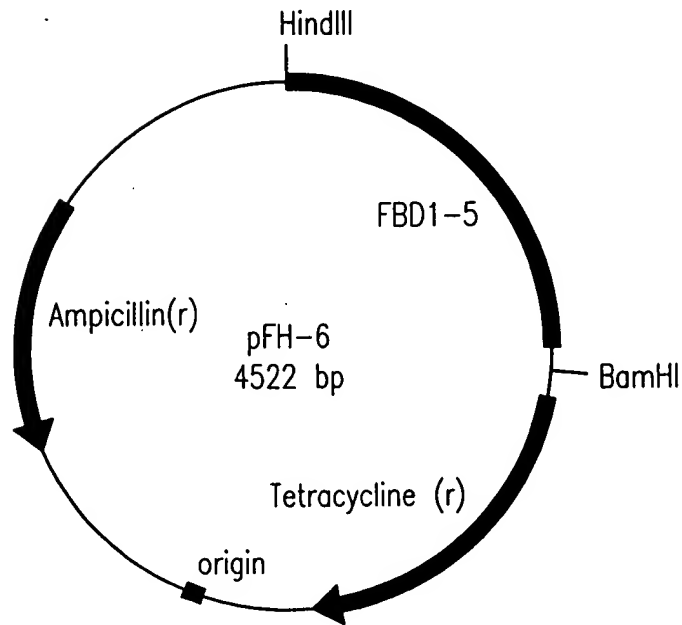


FIG. 5

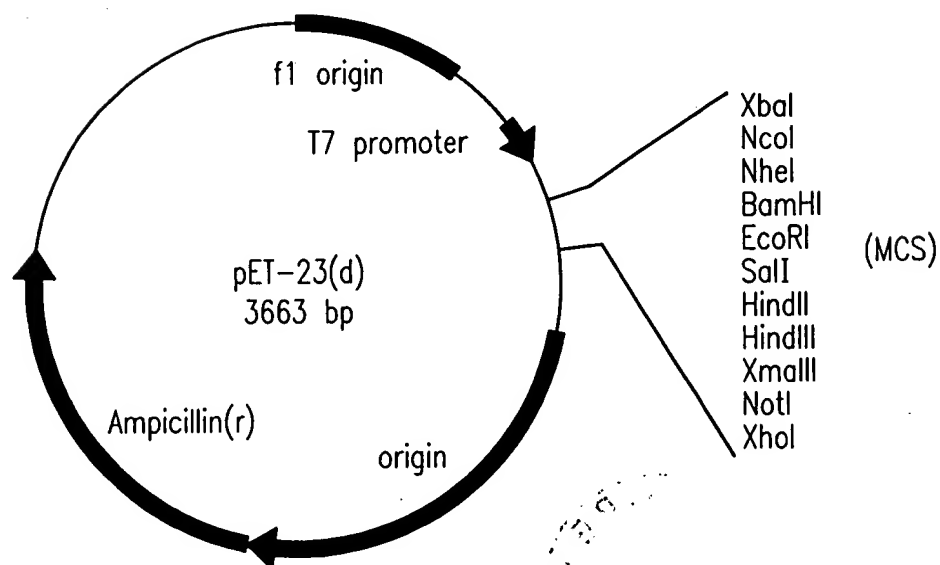


FIG. 8

FIG. 6

| | |
|---|---|
| 1/1 | 31/11 |
| CAG GCT CAG CAA ATG GTT CAG CCC CAG TCC | CCG GTG GCT GTC ACT CAA AGC AAG CCC GGT |
| gln ala gln gln met val gln pro gln ser | pro val ala val ser gln ser lys pro gly |
| 61/21 | 91/31 |
| TGT TAT GAC AAT GGA AAA CAC TAT CAG ATA | AAT CAA CAG TGG GAG CGG ACC TAC CTA GGT |
| cys tyr asp asn gly lys his tyr gln ile | asn gln gln trp glu arg thr tyr leu gly |
| 121/41 | 151/51 |
| AAT GTG TTG GTT TGT ACT TGT TAT GGA GGA | AGC CGA GGT TTT AAC TGC GAA AGT AAA CCT |
| asn val leu val cys thr cys tyr gly gly | ser arg gly phe asn cys glu ser lys pro |
| 181/61 | 211/71 |
| GAA GCT GAA GAG ACT TGC TTT GAC AAG TAC | ACT GGG AAC ACT TAC CGA GTG GGT GAC ACT |
| glu ala glu glu thr cys phe asp lys tyr | thr gly asn thr tyr arg val gly asp thr |
| 241/81 | 271/91 |
| TAT GAG CGT CCT AAA GAC TCC ATG ATC TGG | GAC TGT ACC TGC ATC GGG GCT GGG CGA GGG |
| tyr glu arg pro lys asp ser met ile trp | asp cys thr cys ile gly ala gly arg gly |
| 301/101 | 331/111 |
| AGA ATA AGC TGT ACC ATC GCA AAC CGC TGC | CAT GAA GGG GGT CAG TCC TAC AAG ATT GGT |
| arg ile ser cys thr ile ala asn arg cys | his glu gly gly gln ser tyr lys ile gly |
| 361/121 | 391/131 |
| GAC ACC TGG AGG AGA CCA CAT GAG ACT GGT | GGT TAC ATG TTA GAG TGT GTG TGT CTT GGT |
| asp thr trp arg arg pro his glu thr gly | gly tyr met leu glu cys val cys leu gly |
| 421/141 | 451/151 |
| AAT GGA AAA GGA GAA TGG ACC TGC AAG CCC | ATA GCT GAG AAG TGT TTT GAT CAT GCT GCT |
| asn gly lys gly glu trp thr cys lys pro | ile ala glu lys cys phe asp his ala ala |
| 481/161 | 511/171 |
| GGG ACT TCC TAT GTG GTC GGA GAA ACG TGG | GAG AAG CCC TAC CAA GGC TGG ATG ATG GTA |
| gly thr ser tyr val val gly glu thr trp | glu lys pro tyr gln gly trp met met val |
| 541/181 | 571/191 |
| GAT TGT ACT TGC CTG GGA GAA GGC AGC GGA | CGC ATC ACT TGC ACT TCT AGA AAT AGA TGC |
| asp cys thr cys leu gly glu gly ser gly | arg ile thr cys thr ser arg asn arg cys |
| 601/201 | 631/211 |
| AAC GAT CAG GAC ACA AGG ACA TCC TAT AGA | ATT GGA GAC ACC TGG AGC AAG AAG GAT AAT |
| asn asp gln asp thr arg thr ser tyr arg | ile gly asp thr trp ser lys lys asp asn |
| 661/221 | 691/231 |
| CGA GGA AAC CTG CTC CAG TGC ATC TGC ACA | GGC AAC GGC CGA GGA GAG TGG AAG TGT GAG |
| arg gly asn leu leu gln cys ile cys thr | gly asn gly arg gly glu trp lys cys glu |
| 721/241 | 751/251 |
| AGG CAC ACC TCT GTG CAG ACC ACA TCG AGC | GGA TCT GGC CCC TTC ACC GAT GTT CGT |
| arg his thr ser val gln thr thr ser ser | gly ser gly pro phe thr asp val arg |

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

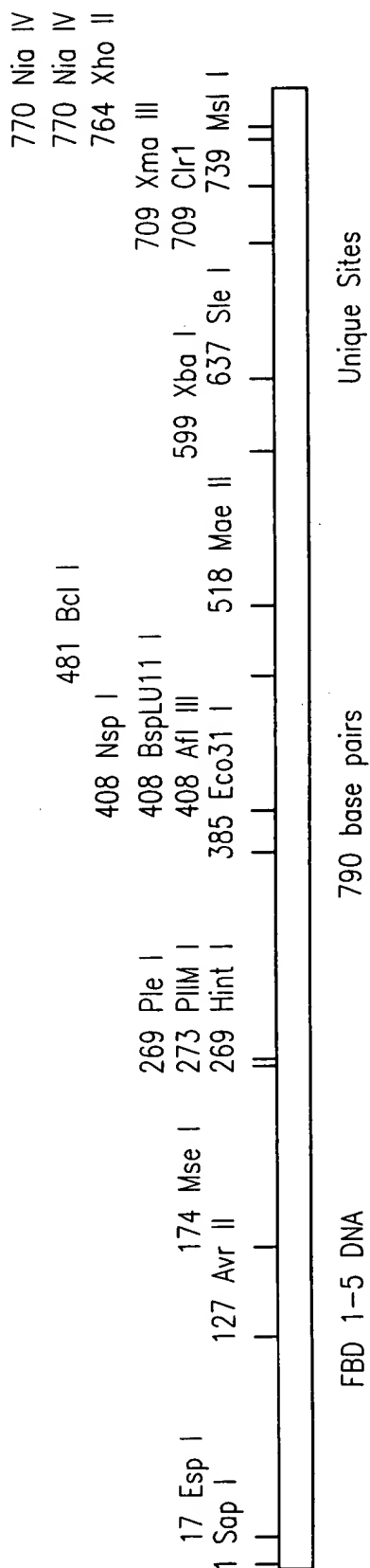


FIG. 7

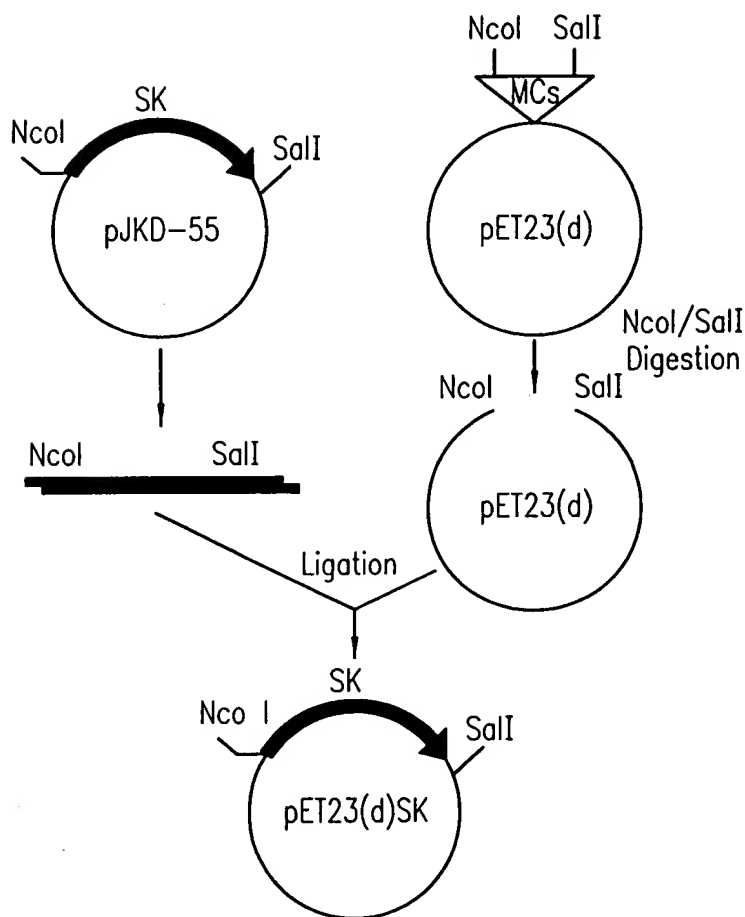


FIG. 9

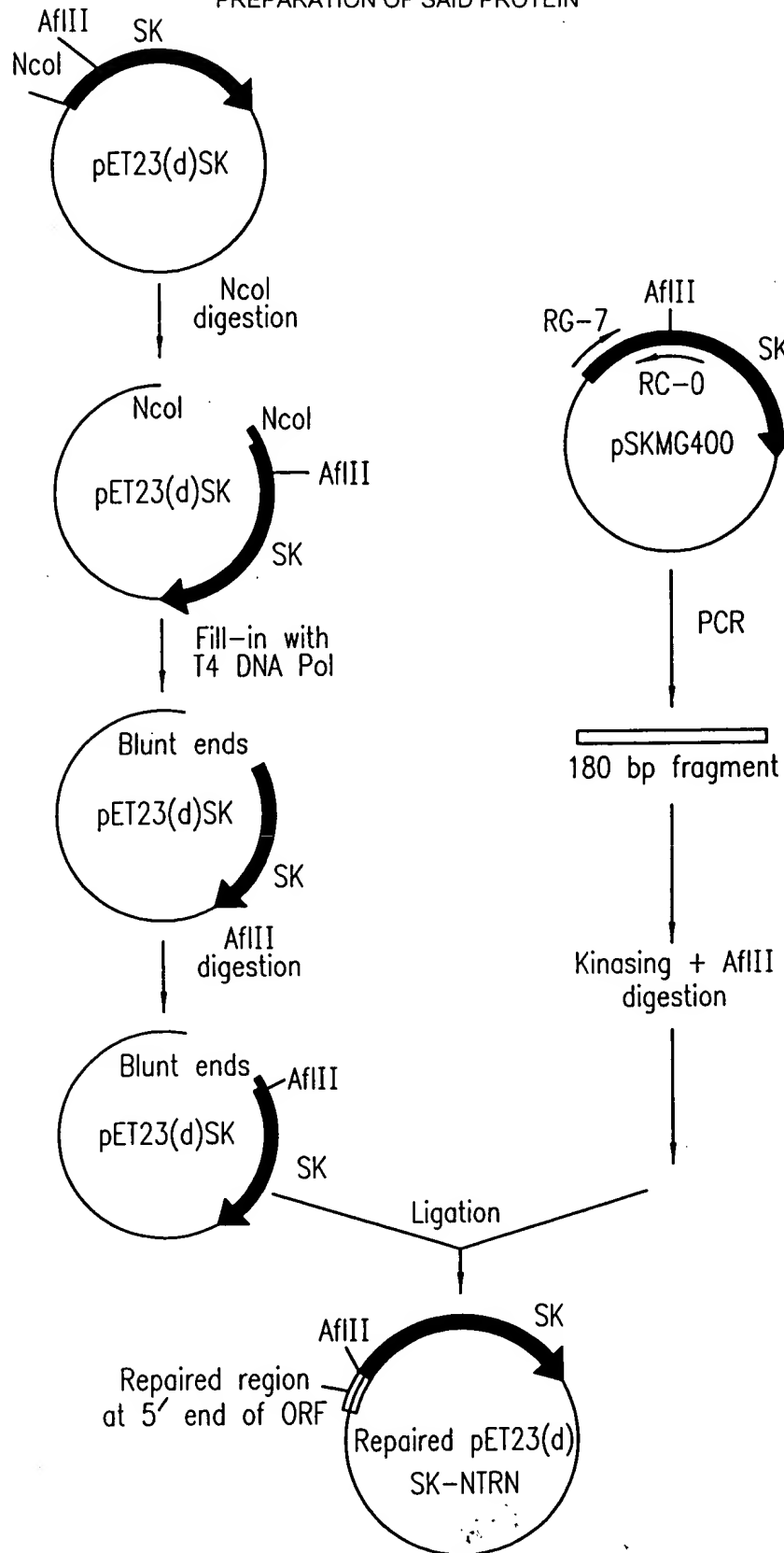
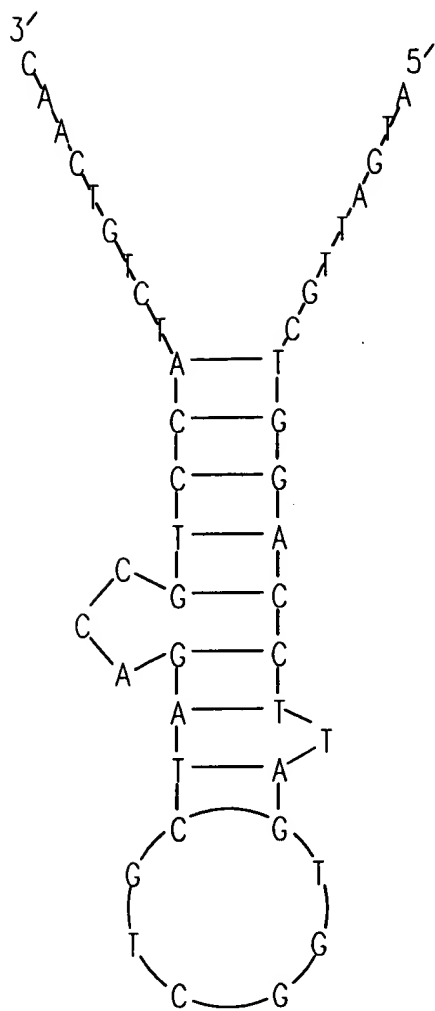


FIG. 10

FIG. 11

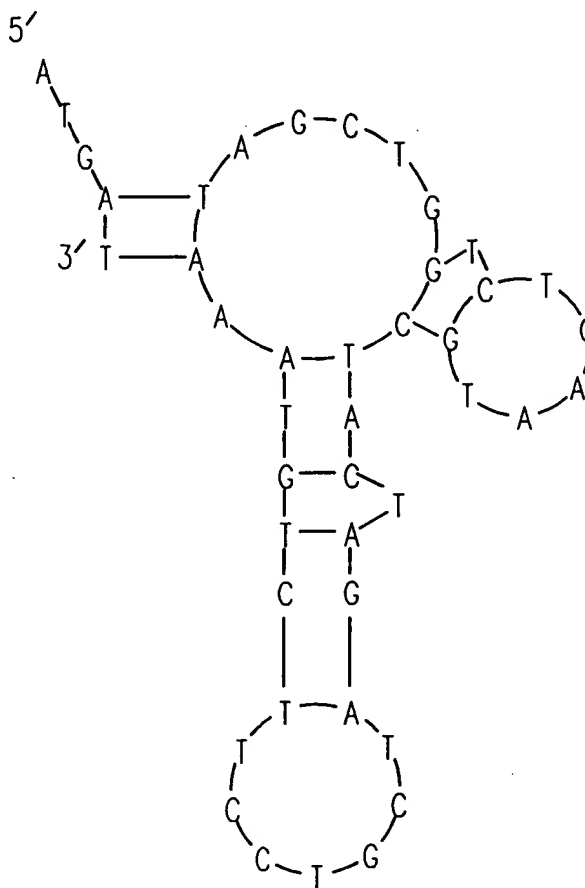
| | 10 | 20 | 30 | 40 | 50 |
|------|------------|------------|------------|------------|------------|
| | GCACCCGTGG | CCAGGACCCA | ACGCTGCCCG | AGATCTCGAT | CCCGCGAAAT |
| 51 | TAATACGACT | CACTATAGGG | AGACCACAAC | GGTTTCCTC | TAGAAATAAT |
| 101 | TTTGTTTAAC | TTTAAGAAGG | AGATATACCA | TGATTGCTGG | ACCTGAGTGG |
| 151 | CTGCTAGACC | GTCCATCTGT | CAACAACAGC | CAATTGGTTG | TTAGCGTTGC |
| 201 | TGGTACTGTT | GAGGGGACGA | ATCAAGACAT | TAGTCTTAAA | TTTTTTGAAA |
| 251 | TCGATCTAAC | ATCACGACCT | GCTCATGGAG | GAAAGACAGA | GCAAGGCTTA |
| 301 | AGTCCAAAAT | CAAAACCATT | TGCTACTGAT | AGTGGCGCGA | TGTCACATAA |
| 351 | ACTTGAGAAA | GCTGACTTAC | TAAAGGCTAT | TCAAGAACAA | TTGATCGCTA |
| 401 | ACGTCCACAG | TAACGACGAC | TACTTTGAGG | TCATTGATTT | TGCAAGCGAT |
| 451 | GCAACCATTA | CTGATCGAAA | CGGCAAGGTC | TACTTTGCTG | ACAAAGATGG |
| 501 | TTCGGTAACC | TTGCCGACCC | AACCTGTCCA | AGAATTTTTG | CTAAGCGGAC |
| 551 | ATGTGCGCGT | TAGACCATAT | AAAGAAAAAC | CAATACAAAA | CCAAGCGAAA |
| 601 | TCTGTTGATG | TGGAATATAC | TGTACAGTTT | ACTCCCTTAA | ACCCTGATGA |
| 651 | CGATTTTACA | CCAGGTCTCA | AAGATACTAA | GCTATTGAAA | ACACTAGCTA |
| 701 | TCGGTGACAC | CATCACATCT | CAAGAATTAC | TAGCTCAAGC | ACAAAGCATT |
| 751 | TTAAACAAAA | ACCACCCAGG | CTATACGATT | TATGAACGTG | ACTCCTCAAT |
| 801 | CGTCACTCAT | GACAATGACA | TTTTCCGTAC | GATTTTACCA | ATGGATCAAG |
| 851 | AGTTTACTTA | CCGTGTTAAA | AATCGGGAAC | AAGCTTATAG | GATCAATAAA |
| 901 | AAATCTGGTC | TGAATGAAGA | AATAAACAAC | ACTGACCTGA | TCTCTGAGAA |
| 951 | ATATTACGTC | CTTAAAAAAG | GGGAAAAGCC | GTATGATCCC | TTTGATCGCA |
| 1001 | GTCACCTGAA | ACTGTTCAAC | ATCAAATACG | TTGATGTCGA | TACCAACGAA |
| 1051 | TTGCTAAAAA | GTGAGCAGCT | CTTAACAGCT | AGCGAACGTA | ACTTAGACTT |
| 1101 | CAGAGATTTA | TACGATCCTC | GTGATAAGGC | TAACTACTC | TACAACAATC |
| 1151 | TCGATGCTTT | TGGTATTATG | GACTATACCT | TAAGTGAAA | AGTAGAGGAT |
| 1201 | AATCACGATG | ACACCAACCG | TATCATAACC | GTTTATATGG | GCAAGCGACC |
| 1251 | CGAAGGAGAG | AATGCTAGCT | ATCATTTAGC | CTATGATAAA | GATCGTTATA |
| 1301 | CCGAAGAAGA | ACGAGAAGTT | TACAGCTACC | TGCGTTATAC | AGGGACACCT |
| 1351 | ATACCTGATA | ACCCTAACGA | CAAATAA | | |

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN



$\Delta G = -10.3 \text{ Kcal/mol}$

FIG. 12A



$\Delta G = -5.0 \text{ Kcal/mol}$

FIG. 12B

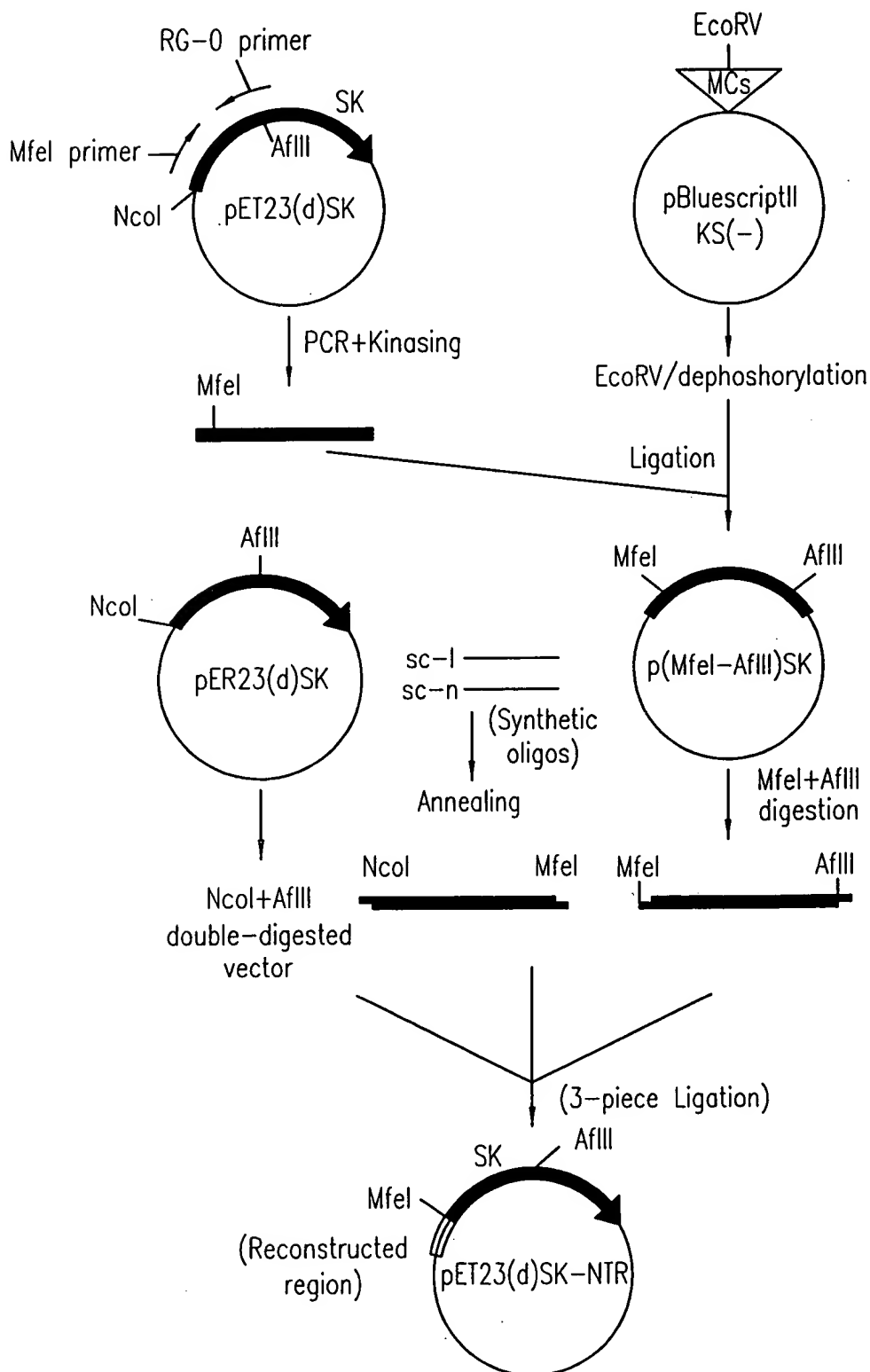


FIG. 13

A No.: 09/940,235

Ant(s): Rajesh Kumar, et al.

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEIN
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

FIG. 14

| | 10 | 20 | 30 | 40 | 50 |
|------|------------|------------|------------|------------|------------|
| | TAATACGACT | CACTATAGGG | AGACCACAAC | GGTTTCCTC | TAGAAATAAT |
| 51 | TTTGTTTAAC | TTTAAGAAGG | AGATATACCA | TGATAGCTGG | TCCTGAATGG |
| 101 | CTACTAGATC | GTCCTTCTGT | AAATAACAGC | CAATTGGTTG | TTAGCGTTGC |
| 151 | TGGTACTGTT | GAGGGGACGA | ATCAAGACAT | TAGTCTTAAA | TTTTTTGAAA |
| 201 | TCGATCTAAC | ATCACGACCT | GCTCATGGAG | GAAAGACAGA | GCAAGGCTTA |
| 251 | AGTCCAAAAT | CAAAACCATT | TGCTACTGAT | AGTGGCGCGA | TGTCACATAA |
| 301 | ACTTGAGAAA | GCTGACTTAC | TAAAGGCTAT | TCAAGAACAA | TTGATCGCTA |
| 351 | ACGTCCACAG | TAACGACGAC | TACTTTGAGG | TCATTGATTT | TGCAAGCGAT |
| 401 | GCAACCATTA | CTGATCGAAA | CGGCAAGGTC | TACTTTGCTG | ACAAAGATGG |
| 451 | TTCGGTAACC | TTGCCGACCC | AACCTGTCCA | AGAATTTTTG | CTAAGCGGAC |
| 501 | ATGTGCGCGT | TAGACCATAT | AAAGAAAAAC | CAATACAAAA | CCAAGCGAAA |
| 551 | TCTGTTGATG | TGGAATATAC | TGTACAGTTT | ACTCCCTTAA | ACCCTGATGA |
| 601 | CGATTTGAGA | CCAGGTCTCA | AAGATACTAA | GCTATTGAAA | ACACTAGCTA |
| 651 | TCGGTGACAC | CATCACATCT | CAAGAATTAC | TAGCTCAAGC | ACAAAGCATT |
| 701 | TTAAACAAAA | ACCACCCAGG | CTATACGATT | TATGAACGTG | ACTCCTCAAT |
| 751 | CGTCACTCAT | GACAATGACA | TTTTCCGTAC | GATTTTACCA | ATGGATCAAG |
| 801 | AGTTTACTTA | CCGTGTTAAA | AATCGGGAAC | AAGCTTATAG | GATCAATAAA |
| 851 | AAATCTGGTC | TGAATGAAGA | AATAAACAAC | ACTGACCTGA | TCTCTGAGAA |
| 901 | ATATTACGTC | CTTAAAAAAG | GGGAAAAGCC | GTATGATCCC | TTTGATCGCA |
| 951 | GTCACTTGAA | ACTGTTCACC | ATCAAATACG | TTGATGTCGA | TACCAACGAA |
| 1001 | TTGCTAAAAA | GTGAGCAGCT | CTTAACAGCT | AGCGAACGTA | ACTTAGACTT |
| 1051 | CAGAGATTTA | TACGATCCTC | GTGATAAGGC | TAACTACTC | TACAACAATC |
| 1101 | TCGATGCTTT | TGGTATTATG | GACTATACCT | TAACTGGAAA | AGTAGAGGAT |
| 1151 | AATCACGATG | ACACCAACCG | TATCATAACC | GTTTATATGG | GCAAGCGACC |
| 1201 | CGAAGGAGAG | AATGCTAGCT | ATCATTTAGC | CTATGATAAA | GATCGTTATA |
| 1251 | CCGAAGAAGA | ACGAGAAGTT | TACAGCTACC | TGCGTTATAC | AGGGACACCT |
| 1301 | ATACCTGATA | ACCCTAACGA | CAAATAA | | |

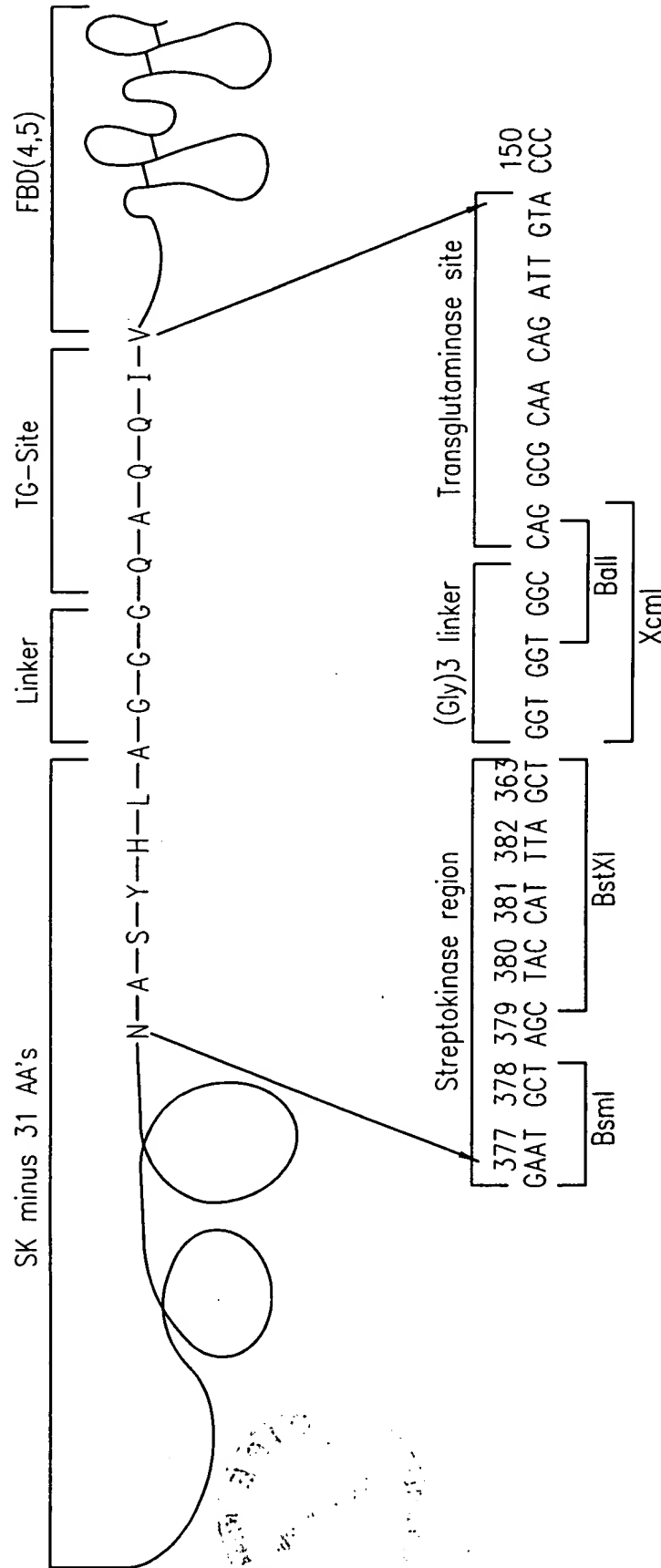


FIG. 15

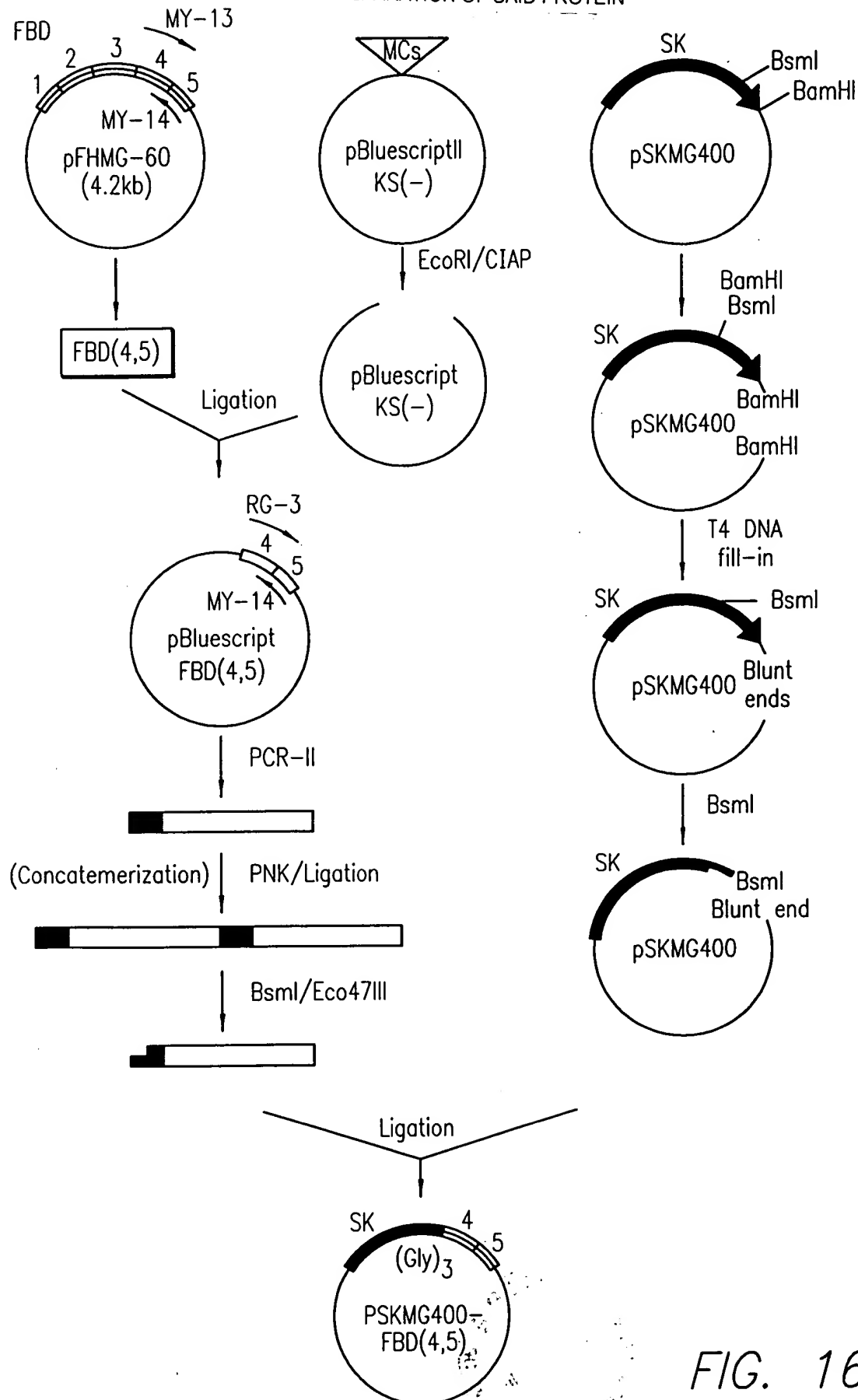


FIG. 16

Inventor(s): Rajesh Kumar, et al.
NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEIN
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

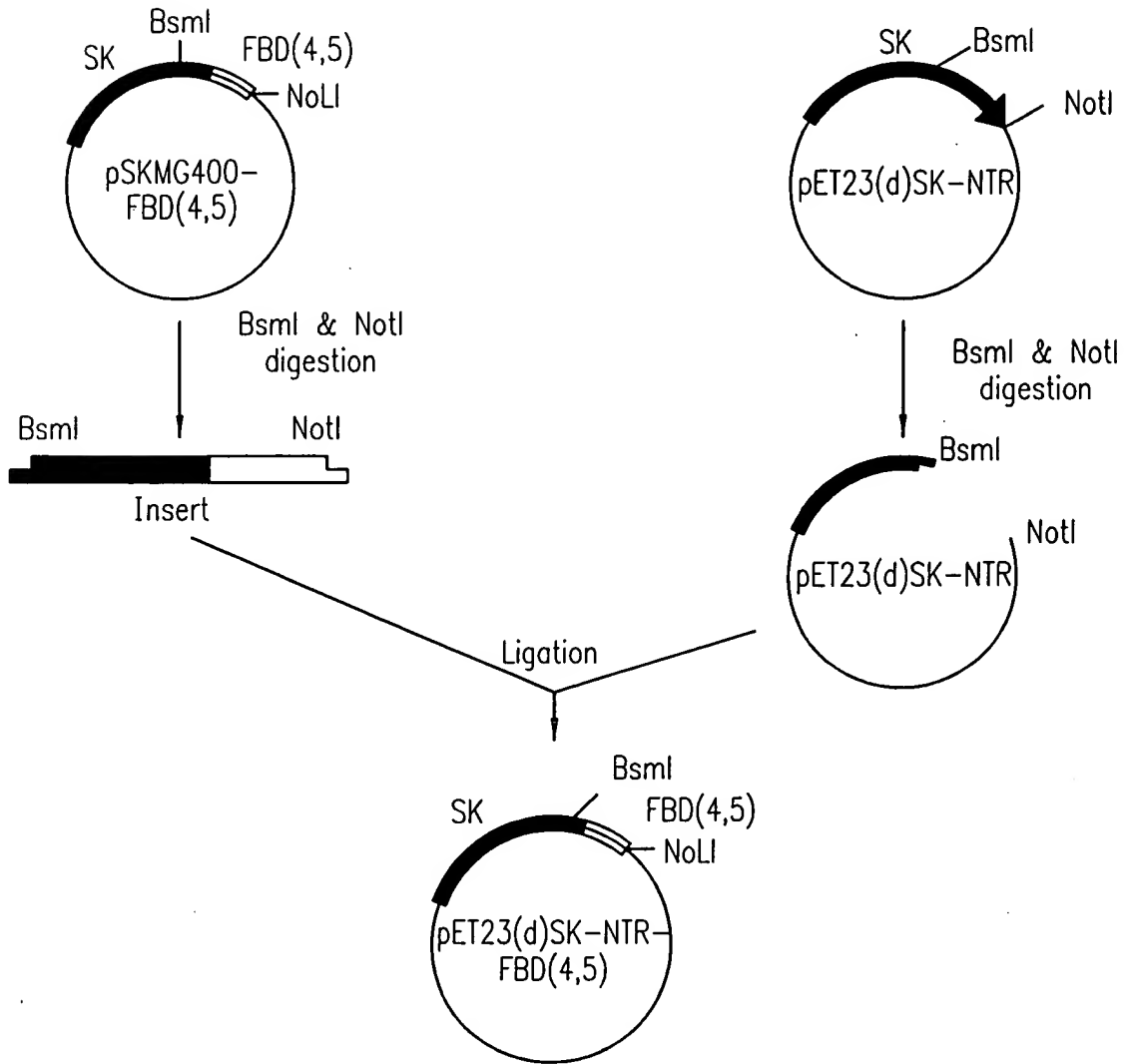


FIG. 17A

Applicant(s): Rajesh Kumar, et al.

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

FIG. 17B

| | 10 | 20 | 30 | 40 | 50 |
|------|-------------|------------|------------|-------------|------------|
| | TTTGTTTAAC | TTTAAGAAGG | AGATATACCA | TGATAGCTGG | TCCTGAATGG |
| 51 | CTACTAGATC | GTCCTTCTGT | AAATAACAGC | CAATTGGTTG | TTAGCGTTGC |
| 101 | TGGTACTGTT | GAGGGGACGA | ATCAAGACAT | TAGTCTTAAA | TTTTTTGAAA |
| 151 | TCGATCTAAC | ATCACGACCT | GCTCATGGAG | GAAAGACAGA | GCAAGGCTTA |
| 201 | AGTCCAAAAT | CAAAACCATT | TGCTACTGAT | AGTGGCGCGA | TGTCACATAA |
| 251 | ACTTGAGAAA | GCTGACTTAC | TAAAGGCTAT | TCAAGAACAA | TTGATCGCTA |
| 301 | ACGTCCACAG | TAACGACGAC | TACTTTGAGG | TCATTGATTT | TGCAAGCGAT |
| 351 | GCAACCATTA | CTGATCGAAA | CGGCAAGGTC | TACTTTGCTG | ACAAAGATGG |
| 401 | TTCGGTAACC | TTGCCGACCC | AACCTGTCCA | AGAATTTTTG | CTAAGCGGAC |
| 451 | ATGTGCGCGT | TAGACCATAT | AAAGAAAAAC | CAATACAAAA | CCAAGCGAAA |
| 501 | TCTGTTGATG | TGGAATATAC | TGTACAGTTT | ACTCCCTTAA | ACCCTGATGA |
| 551 | CGATTTCCAGA | CCAGGTCTCA | AAGATACTAA | GCTATTGAAA | ACACTAGCTA |
| 601 | TCGGTGACAC | CATCACATCT | CAAGAATTAC | TAGCTCAAGC | ACAAAGCATT |
| 651 | TTAAACAAAA | ACCACCCAGG | CTATACGATT | TATGAACGTG | ACTCCTCAAT |
| 701 | CGTCACTCAT | GACAATGACA | TTTTCCGTAC | GATTTTACCA | ATGGATCAAG |
| 751 | AGTTTACTTA | CCGTGTTAAA | AATCGGGAAC | AAGCTTATAG | GATCAATAAA |
| 801 | AAATCTGGTC | TGAATGAAGA | AATAACAAC | ACTGACCTGA | TCTCTGAGAA |
| 851 | ATATTACGTC | CTTAAAAAAG | GGGAAAAGCC | GTATGATCCC | TTTGATCGCA |
| 901 | GTCACCTGAA | ACTGTTCAAC | ATCAAATACG | TTGATGTCGA | TACCAACGAA |
| 951 | TTGCTAAAAA | GTGAGCAGCT | CTTAACAGCT | AGCGAACGTA | ACTTAGACTT |
| 1001 | CAGAGATTTA | TACGATCCTC | GTGATAAGGC | TAAACTACTC | TACAACAATC |
| 1051 | TCGATGCTTT | TGGTATTATG | GACTATACCT | TAAGTGGAAA | AGTAGAGGAT |
| 1101 | AATCACGATG | ACACCAACCG | TATCATAACC | GTTTATATGG | GCAAGCGACC |
| 1151 | CGAAGGAGAG | AATGCTAGCT | ACCATTTAGC | TGGTGGTGGC | CAGGCGCAAC |
| 1201 | AGATTGTACC | CATAGCTGAG | AAGTGTTTTG | ATCATGCTGC | TGGGACTTCC |
| 1251 | TATGTGGTCG | GAGAAACGTG | GGAGAAGCCC | TACCAAGGCT | GGATGATGGT |
| 1301 | AGATTGTACT | TGCCTGGGAG | AAGGCAGCGG | ACGCATCACT | TGCACTTCTA |
| 1351 | GAAATAGATG | CAACGATCAG | GACACAAGGA | CATCCTATAG | AATTGGAGAC |
| 1401 | ACCTGGAGCA | AGAAGGATAA | TCGAGGAAAC | CTGCTCCAGT | GCATCTGCAC |
| 1451 | AGGCAACGGC | CGAGGAGAGT | GGAAGTGTGA | GAGGCACACC | TCTGTGCAGA |
| 1501 | CCACATCGAG | CGGATCTGGC | CCCTTCACCG | ATGTTTCGTTA | G |

Inventor(s): Rajesh Kumar, et al.
 NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEIN
 POSSESSING ALTERED PLASMINOGEN ACTIVATION
 CHARACTERISTICS AND A PROCESS FOR THE
 PREPARATION OF SAID PROTEIN

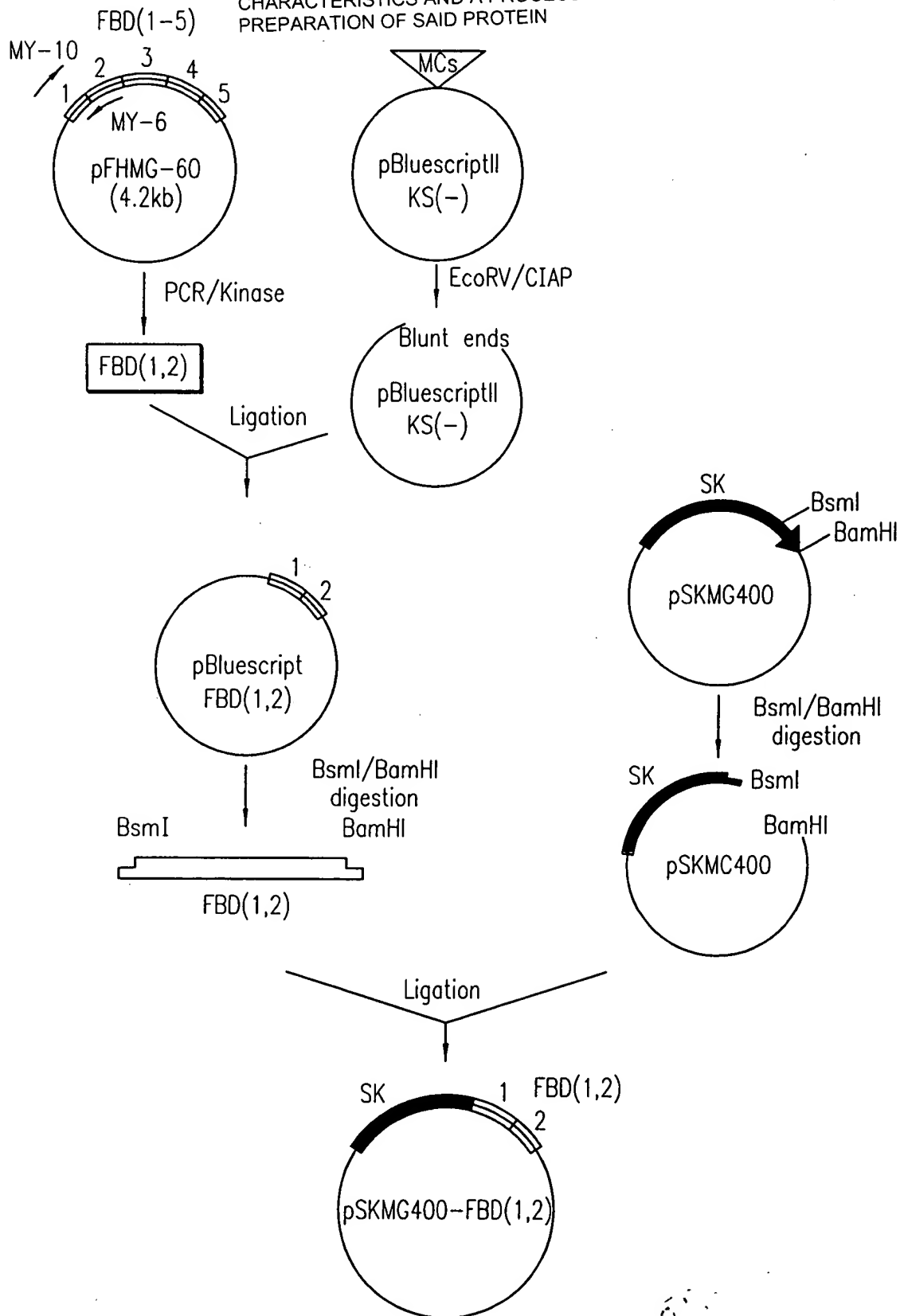


FIG. 18

In No.: 09/940,235
licant(s): Rajesh Kumar, et al.
NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

Page 9 of 26

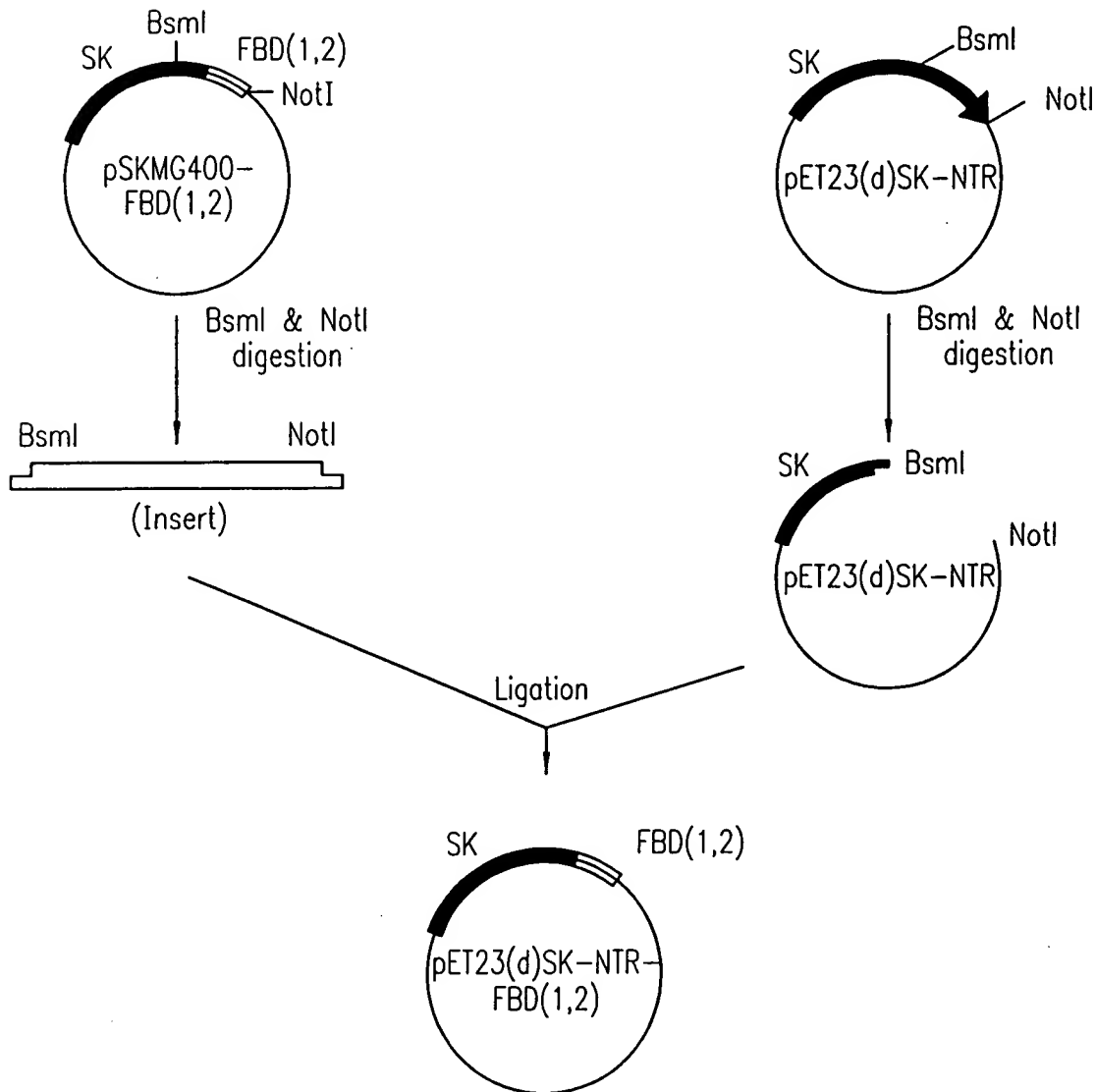


FIG. 19A

FIG. 19B

| | 10 | 20 | 30 | 40 | 50 |
|------|-------------|-------------|-------------|------------|------------|
| | GCAACCCCGC | CAGCCTAGCC | GGGTCCTCAA | CGACAGGAGC | ACGATCATGC |
| 51 | GCACCCGTGG | CCAGGACCCA | ACGCTGCCCC | AGATCTCGAT | CCCGCGAAAT |
| 101 | TAATACGACT | CACTATAGGG | AGACCACAAC | GGTTTCCTC | TAGAAATAAT |
| 151 | TTTGTTTAAC | TTTAAGAAGG | AGATATACCA | TGATTGCTGG | ACCTGAGTGG |
| 201 | CTGCTAGACC | GTCCATCTGT | CAACAACAGC | CAATTGGTTG | TTAGCGTTGC |
| 251 | TGGTACTGTT | GAGGGGACGA | ATCAAGACAT | TAGTCTTAAA | TTTTTTGAAA |
| 301 | TCGATCTAAC | ATCACGACCT | GCTCATGGAG | GAAAGACAGA | GCAAGGCTTA |
| 351 | AGTCCAAAT | CAAAACCATT | TGCTACTGAT | AGTGGCGCGA | TGTCACATAA |
| 401 | ACTTGAGAAA | GCTGACTTAC | TAAAGGCTAT | TCAAGAACAA | TTGATCGCTA |
| 451 | ACGTCCACAG | TAACGACGAC | TACTTTGAGG | TCATTGATTT | TGCAAGCGAT |
| 501 | GCAACCATTA | CTGATCGAAA | CGGCAAGGTC | TACTTTGCTG | ACAAAGATGG |
| 551 | TTCCGTAACC | TTGCCGACCC | AACCTGTCCA | AGAATTTTGT | CTAAGCGGAC |
| 601 | ATGTGCGCGT | TAGACCATAT | AAAGAAAAAC | CAATACAAAA | CCAAGCGAAA |
| 651 | TCTGTTGATG | TGGAATATAC | TGTACAGTTT | ACTCCCTTAA | ACCCTGATGA |
| 701 | CGATTTTACA | CCAGGTCTCA | AAGATACTAA | GCTATTGAAA | ACACTAGCTA |
| 751 | TCGGTGACAC | CATCACATCT | CAAGAATTAC | TAGCTCAAGC | ACAAAGCATT |
| 801 | TTAAACAAAA | ACCACCCAGG | CTATACGATT | TATGAACGTG | ACTCCTCAAT |
| 851 | CGTCACTCAT | GACAATGACA | TTTTCCGTAC | GATTTTACCA | ATGGATCAAG |
| 901 | AGTTTACTTA | CCGTGTTAAA | AATCGGGAAC | AAGCTTATAG | GATCAATAAA |
| 951 | AAATCTGGTC | TGAATGAAGA | AATAAAACAAC | ACTGACCTGA | TCTCTGAGAA |
| 1001 | ATATTACGTC | CTTAAAAAAG | GGGAAAAGCC | GTATGATCCC | TTTGATCGCA |
| 1051 | GTCAC TTGAA | ACTGTTTACC | ATCAAATACG | TTGATGTCGA | TACCAACGAA |
| 1101 | TTGCTAAAAA | GTGAGCAGCT | CTTAACAGCT | AGCGAACGTA | ACTTAGACTT |
| 1151 | CAGAGATTTA | TACGATCCTC | GTGATAAGGC | TAACTACTC | TACAACAATC |
| 1201 | TCGATGCTTT | TGGTATTATG | GA CTATACCT | TAACTGGAAA | AGTAGAGGAT |
| 1251 | AATCACGATG | ACACCAACCG | TATCATAACC | GTTTATATGG | GCAAGCGACC |
| 1301 | CGAAGGAGAG | AATGCTAGCT | ATCATTTAGC | CGGTGGTGGT | CAGGCGCAGC |
| 1351 | AAATGGTTCA | GCCCCAGTCC | CCGGTGGCTG | TCAGTCAAAG | CAAGCCCGGT |
| 1401 | TGTTATGACA | ATGGAAAACA | CTATCAGATA | AATCAACAGT | GGGAGCGGAC |
| 1451 | CTACCTAGGT | AATGTGTTGG | TTTGTACTTG | TTATGGAGGA | AGCCGAGGTT |
| 1501 | TTAACTGCGA | AAGTAAACCT | GAAGCTGAAG | AGACTTGCTT | TGACAAGTAC |
| 1551 | ACTGGGAACA | CTTACCGAGT | GGGTGACACT | TATGAGCGTC | CTAAAGACTC |
| 1601 | CATGATCTGG | GA CTGTACCT | GCATCGGGGC | TGGGCGAGGG | AGAATAAGCT |
| 1651 | GTACCATCTA | A | | | |

Applicant(s): Rajesh Kumar, et al.

NOVEL CLOT-SPECIFIC STREPTOKINASE PROTEINS
POSSESSING ALTERED PLASMINOGEN ACTIVATION
CHARACTERISTICS AND A PROCESS FOR THE
PREPARATION OF SAID PROTEIN

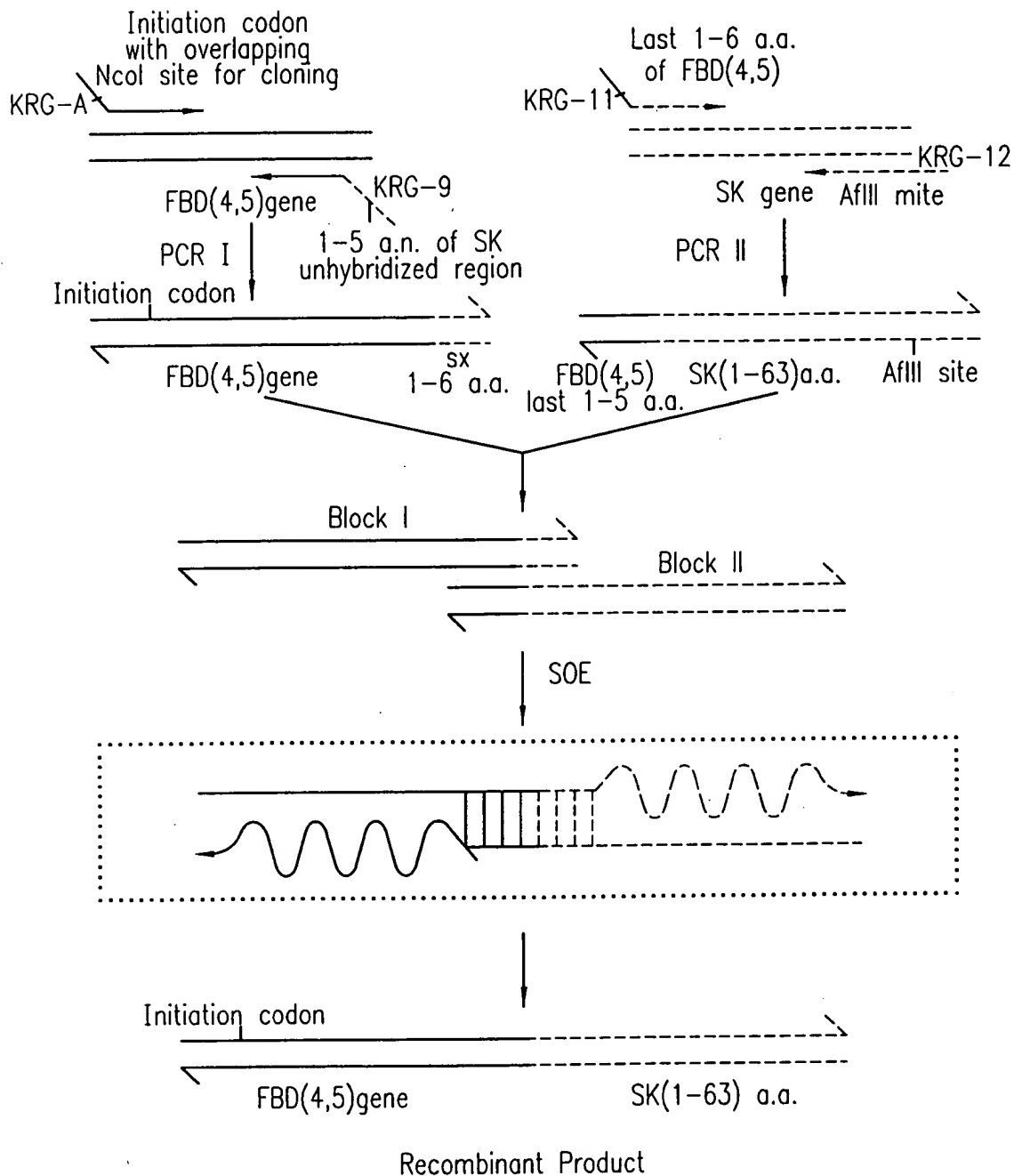


FIG. 20

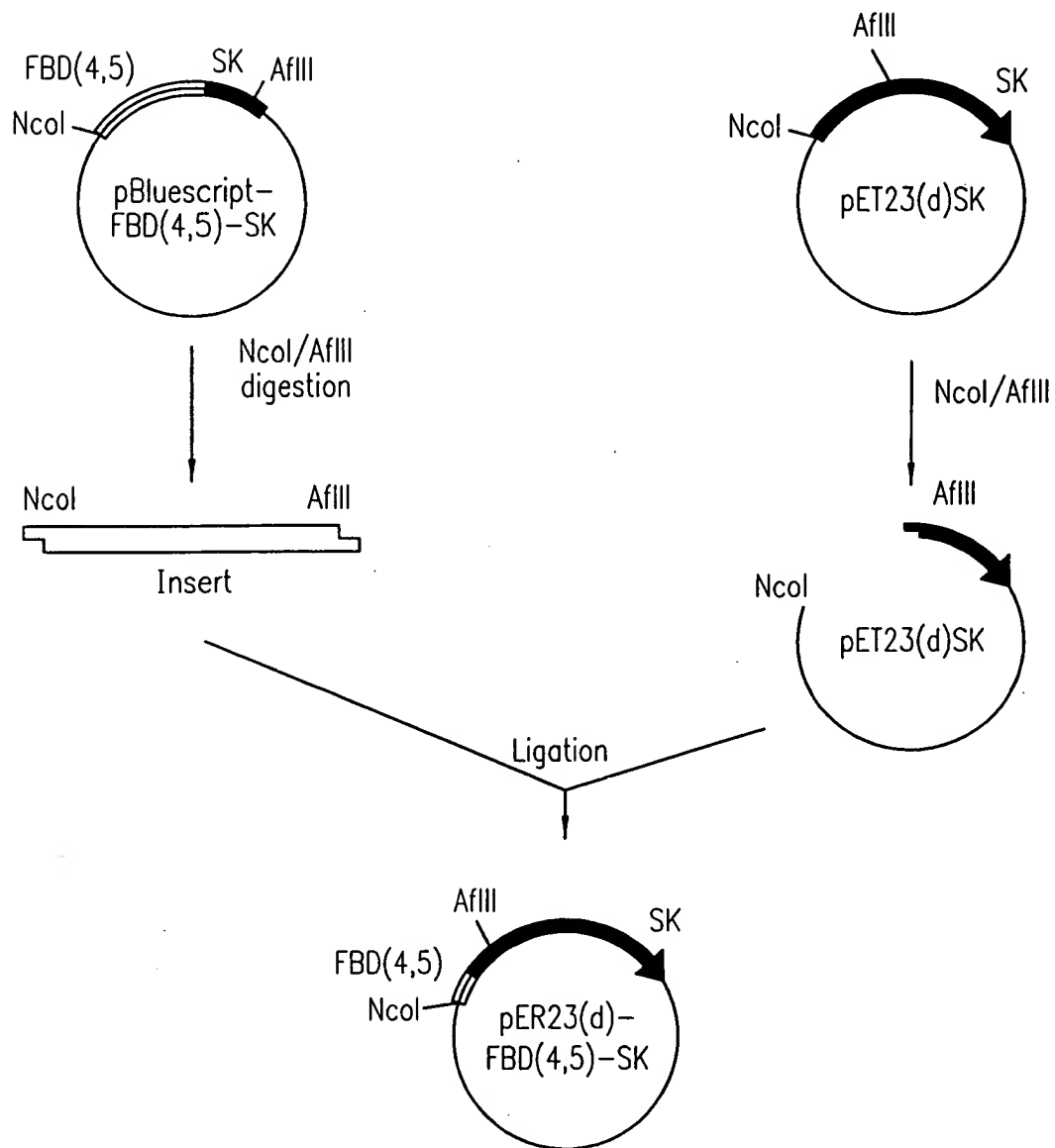


FIG. 21A

FIG. 21B

| | 10 | 20 | 30 | 40 | 50 |
|------|------------|-------------|------------|------------|------------|
| 1 | TCGCTTCACG | TTCGCTCGCG | TATCGGTGAT | TCATTCTGCT | AACCAGTAAG |
| 51 | GCAACCCCGC | CAGCCTAGCC | GGGTCCTCAA | CGACAGGAGC | ACGATCATGC |
| 101 | GCACCCGTGG | CCAGGACCCA | ACGCTGCCCC | AGATCTCGAT | CCCGCGAAAT |
| 151 | TAATACGACT | CACTATAGGG | AGACCACAAC | GGTTTCCCTC | TAGAAATAAT |
| 201 | TTTGTTTAAC | TTTAAGAAGG | AGATATACCA | TGGTGCAAGC | ACAACAGATT |
| 251 | GTACCCATAG | CTGAGAAGTG | TTTTGATCAT | GCTGCTGGGA | CTTCCTATGT |
| 301 | GGTCGGAGAA | ACGTGGGAGA | AGGCAGCGGA | CGCATCACTT | GCACTTCTAG |
| 351 | AAATAGATGC | AACGATCAGG | ACACAAGGAC | ATCCTATAGA | ATTGGAGACA |
| 401 | CCTGGAGCAA | GAAGGATAAT | CGAGGAAACC | TGCTCCAGTG | CATCTGCACA |
| 451 | GGCAACGGCC | GAGGAGAGTG | GAAGTGTGAG | AGGCACACCT | CTGTGCAGAC |
| 501 | CACATCGAGC | GGATCTGGCC | CCTTCACCGA | TGTTCGTATT | GCTGGACCTG |
| 551 | AGTGGCTGCT | AGACCGTCCA | TCTGTCAACA | ACAGCCAATT | GGTTGTTAGC |
| 601 | GTTGCTGGTA | CTGTTGAGGG | GACGAATCAA | GACATTAGTC | TTAAATTTTT |
| 651 | TGAAATCGAT | CTAACATCAC | GACCTGCTCA | TGGAGGAAAG | ACAGAGCAAG |
| 701 | GCTTAAGTCC | AAAATCAAAA | CCATTTGCTA | CTGATAGTGG | CGCGATGTCA |
| 751 | CATAAACTTG | AGAAAGCTGA | CTTACTAAAG | GCTATTCAAG | AACAATTGAT |
| 801 | CGCTAACGTC | CACAGTAACG | ACGACTACTT | TGAGGTCATT | GATTTTGCAA |
| 851 | GCGATGCAAC | CATTACTGAT | CGAAACGGCA | AGGTCTACTT | TGCTGACAAA |
| 901 | GATGGTTCCG | TAACCTTGCC | GACCCAACCT | GTCCAAGAAT | TTTTGCTAAG |
| 951 | CGGACATGTG | CGCGTTAGAC | CATATAAAGA | AAAACCAATA | CAAAACCAAG |
| 1001 | CGAAATCTGT | TGATGTGGAA | TATACTGTAC | AGTTTACTCC | CTTAAACCCT |
| 1051 | GATGACGATT | TCAGACCAGG | TCTCAAAGAT | ACTAAGCTAT | TGAAAACACT |
| 1101 | AGCTATCGGT | GACACCATCA | CATCTCAAGA | ATTACTAGCT | CAAGCACAAA |
| 1151 | GCATTTTAAA | CAAAAACCAC | CCAGGCTATA | CGATTTATGA | ACGTGACTCC |
| 1201 | TCAATCGTCA | CTCATGACAA | TGACATTTTC | CGTACGATTT | TACCAATGGA |
| 1251 | TCAAGAGTTT | ACTTACCGTG | TTAAAAATCG | GGAACAAGCT | TATAGGATCA |
| 1301 | ATAAAAAATC | TGGTCTGAAT | GAAGAAATAA | ACAACACTGA | CCTGATCTCT |
| 1351 | GAGAAATATT | ACGTCCTTAA | AAAAGGGGAA | AAGCCGTATG | ATCCCTTTGA |
| 1401 | TCGCAGTCAC | TTGAAACTGT | TCACCATCAA | ATACGTTGAT | GTCGATACCA |
| 1451 | ACGAATTGCT | AAAAAGTGAG | CAGCTCTTAA | CAGCTAGCGA | ACGTAACCTA |
| 1501 | GACTTCAGAG | ATTTATACGA | TCCTCGTGAT | AAGGCTAAAC | TACTCTACAA |
| 1551 | CAATCTCGAT | GCTTTTG GTA | TTATGGACTA | TACCTTAACT | GGAAAAGTAG |
| 1601 | AGGATAATCA | CGATGACACC | AACCGTATCA | TAACCGTTTA | TATGGGCAAG |
| 1651 | CGACCCGAAG | GAGAGAATGC | TAGCTATCAT | TTAGCCTATG | ATAAAGATCG |
| 1701 | TTATACCGAA | GAAGAACGAG | AAGTTTACAG | CTACCTGCGT | TATACAGGGA |
| 1751 | CACCTATACC | TGATAACCCT | AACGACAAAT | AA | |

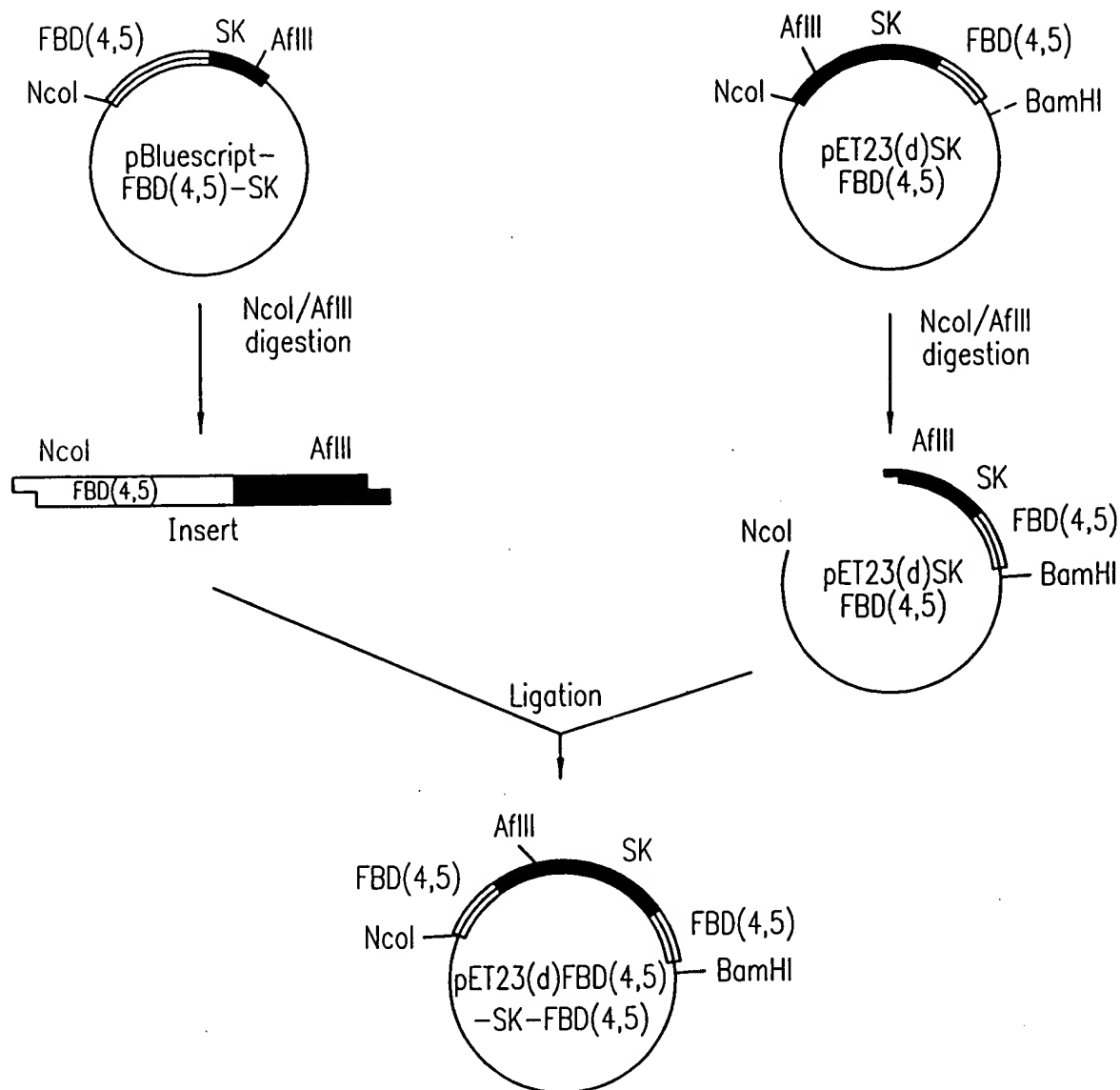
*FIG. 22A*

FIG. 22B

| | 10 | 20 | 30 | 40 | 50 |
|------|------------|------------|------------|------------|------------|
| 1 | CGAAGACCAT | TCATGTTGTT | GCTCAGGTCG | CAGACGTTTT | GCAGCAGCAG |
| 51 | TCGCTTCACG | TTCGCTCGCG | TATCGGTGAT | TCATTCTGCT | AACCAGTAAG |
| 101 | GCAACCCCGC | CAGCCTAGCC | GGGTCCTCAA | CGACAGGAGC | ACGATCATGC |
| 151 | GCACCCGTGG | CCAGGACCCA | ACGCTGCCCC | AGATCTCGAT | CCCGCGAAAT |
| 201 | TAATACGACT | CACTATAGGG | AGACCACAAC | GGTTTCCTC | TAGAAATAAT |
| 251 | TTTGTTTAAC | TTTAAGAAGG | AGATATACCA | TGGTGCAAGC | ACAACAGATT |
| 301 | GTACCCATAG | CTGAGAAGTG | TTTTGATCAT | GCTGCTGGGA | CTTCCTATGT |
| 351 | GGTCGGAGAA | ACGTGGGAGA | AGGCAGCGGA | CGCATCACTT | GCATTCTAG |
| 401 | AAATAGATGC | AACGATCAGG | ACACAAGGAC | ATTCTATAGA | ATTGGAGACA |
| 451 | CCTGGAGCAA | GAAGGATAAT | CGAGGAAACC | TGCTCCAGTG | CATCTGCACA |
| 501 | GGCAACGGCC | GAGGAGAGTG | GAAGTGTGAG | AGGCACACCT | CTGTGCAGAC |
| 551 | CACATCGAGC | GGATCTGGCC | CCTTCACCGA | TGTTCTGATT | GCTGGACCTG |
| 601 | AGTGGCTGCT | AGACCGTCCA | TCTGTCAACA | ACAGCCAATT | GGTTGTTAGC |
| 651 | GTTGCTGGTA | CTGTTGAGGG | GACGAATCAA | GACATTAGTC | TTAAATTTTT |
| 701 | TGAAATCGAT | CTAACATCAC | GACCTGCTCA | TGGAGGAAAG | ACAGAGCAAG |
| 751 | GCTTAAGTCC | AAAATCAAAA | CCATTTGCTA | CTGATAGTGG | CGCGATGTCA |
| 801 | CATAAACTTG | AGAAAGCTGA | CTTACTAAAG | GCTATTCAAG | AACAATTGAT |
| 851 | CGCTAACGTC | CACAGTAACG | ACGACTACTT | TGAGGTCATT | GATTTTGCAA |
| 901 | GCGATGCAAC | CATTACTGAT | CGAAACGGCA | AGGTCTACTT | TGCTGACAAA |
| 951 | GATGGTTCGG | TAACCTTGCC | GACCCAACCT | GTCCAAGAAT | TTTTGCTAAG |
| 1001 | CGGACATGTG | CGCGTTAGAC | CATATAAAGA | AAAACCAATA | CAAAACCAAG |
| 1051 | CGAAATCTGT | TGATGTGGAA | TATACTGTAC | AGTTTACTCC | CTTAAACCCT |
| 1101 | GATGACGATT | TCAGACCAGG | TCTCAAAGAT | ACTAAGCTAT | TGAAAACACT |
| 1151 | AGCTATCGGT | GACACCATCA | CATCTCAAGA | ATTACTAGCT | CAAGCACAAA |
| 1201 | GCATTTTAAA | CAAAAACCAC | CCAGGCTATA | CGATTTATGA | ACGTGACTCC |
| 1251 | TCAATCGTCA | CTCATGACAA | TGACATTTTC | CGTACGATTT | TACCAATGGA |
| 1301 | TCAAGAGTTT | ACTTACCGTG | TTAAAAATCG | GGAACAAGCT | TATAGGATCA |
| 1351 | ATAAAAAATC | TGGTCTGAAT | GAAGAAATAA | ACAACACTGA | CCTGATCTCT |
| 1401 | GAGAAATATT | ACGTCCTTAA | AAAAGGGGAA | AAGCCGTATG | ATCCCTTTGA |
| 1451 | TCGCAGTCAC | TTGAAACTGT | TCACCATCAA | ATACGTTGAT | GTCGATACCA |
| 1501 | ACGAATTGCT | AAAAAGTGAG | CAGCTCTTAA | CAGCTAGCGA | ACGTAACCTA |
| 1551 | GACTTCAGAG | ATTTATACGA | TCCTCGTGAT | AAGGCTAAAC | TACTCTACAA |
| 1601 | CAATCTCGAT | GCTTTTGTA | TTATGGACTA | TACCTTAAC | GGAAAAGTAG |
| 1651 | AGGATAATCA | CGATGACACC | AACCGTATCA | TAACCGTTTA | TATGGGCAAG |
| 1701 | CGACCCGAAG | GAGAGAATGC | TAGCTACCAT | TTAGCTGGTG | GTGGCCAGGC |
| 1751 | GCAACAGATT | GTACCCATAG | CTGAGAAGTG | TTTTGATCAT | GCTGCTGGGA |
| 1801 | CTTCCTATGT | GGTCGGAGAA | ACGTGGGAGA | AGCCCTACCA | AGCCTGGATG |
| 1851 | ATGGTAGATT | GTAATTGCCT | GGGAGAAGGC | AGCGGACGCA | TCACTTGCAC |
| 1901 | TTCTAGAAAT | AGATGCAACG | ATCAGGACAC | AAGGACATCC | TATAGAATTG |
| 1951 | GAGACACCTG | GAGCAAGAAG | GATAATCGAG | GAAACCTGCT | CCAGTGCATC |
| 2001 | TGCACAGGCA | ACGGCCGAGG | AGAGTGGAAG | TGTGAGAGGC | ACACCTCTGT |
| 2051 | GCAGACCACA | TCGAGCGGAT | CTGGCCCCTT | CACCGATGTT | CGTTAG |

FIG. 23

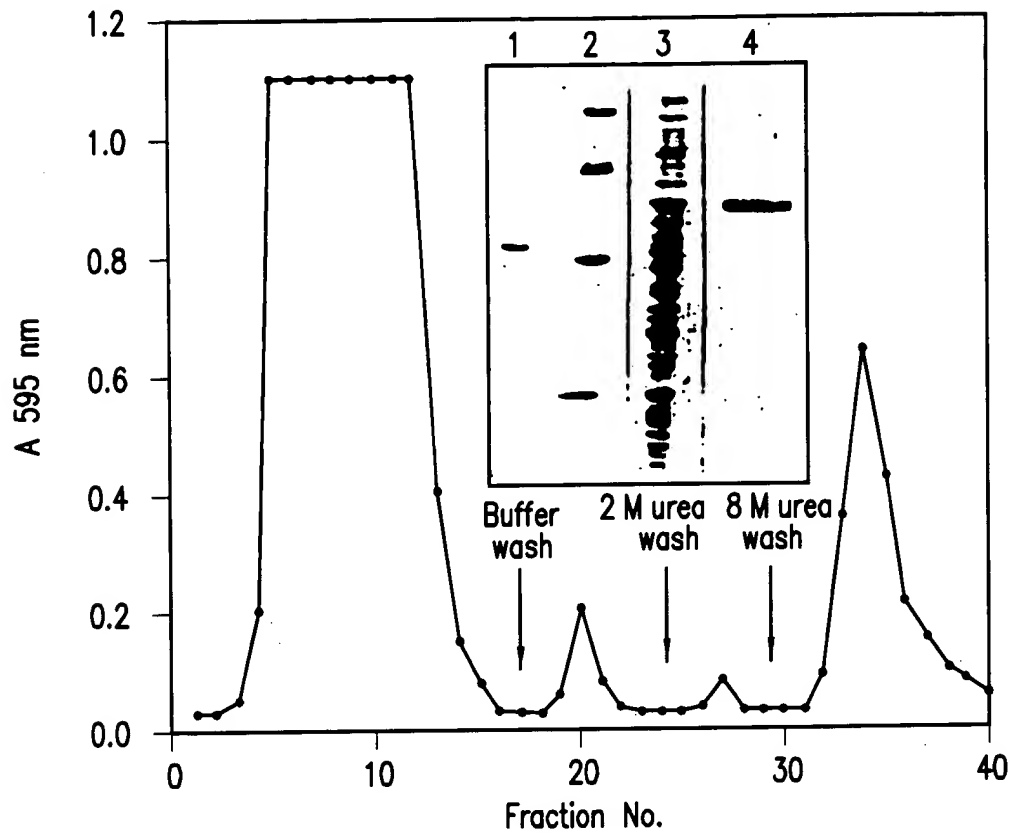


FIG. 24

